Peptide Science

Author Index to Volume 51

Adinolfi, S.
—; Bagni, C.; Castiglione Morelli, M. A.; Fraternali, F.; Musco, G.; Pastore, A.: Novel RNA-Binding Motif: The KH Module, 153
Agnes, R. S. See Hruby, V. J., 391
Aimoto, S.
Polypeptide Synthesis by the Thioester Method, 247
Akaji, K. See Kiso, Y., 59
Ayers, B.
—; Blaschke, U. K.; Camarero, J. A.; Cotton, G. J.; Holford, M.; Muir, T. W.: Introduction of Unnatural Amino Acids into Proteins Using Expressed Protein Ligation (asterik needs set), 343

Bagni, C. See Adinolfi, S., 153
Bajusz, S.
—; Fauszt, I.; Németh, K.; Barabás, É.; Juhász, A.; Patthy, M.; Bauer, P. I.: Peptidyl β-Homo-Aspartals (3-Amino-4-Carboxybutyral-dehydes): New Specific Inhibitors of Caspases, 109
Barabás, E. See Bajusz, S., 109
Barbar, E.
NMR Characterization of Partially Folded and Unfolded Conformational Ensembles of Proteins, 191
Barlos, K.
—; Gatos, D.: 9-Fluorenylmethyloxycarbonyl/*t*Butyl-Based Convergent Protein Synthesis, 266
Bauer, P. I. See Bajusz, S., 109
Bechinger, B.
—; Kinder, R.; Helmle, M.; Vogt, T. C. B.; Harzer, U.; Schinzel, S.: Peptide Structural Analysis by Solid-State NMR Spectroscopy, 174
Beligere, G. S.
—; Dawson, P. E.: Synthesis of a Three Zinc Finger Protein, Zif268, by Native Chemical Ligation, 363
Benedetti, E.
Editorial: Peptide Structure and Bioactivity, 119
Beppu, Y. See Kido, H., 79
Berchtold, H.
—; Hilgenfeld, R.: Binding of Phenol to R_6 Insulin Hexamers, 165
Berezowska, I. See Schiller, P. W., 411
Blaschke, U. K. See Ayers, B., 343
Burkhart, B. M.
—; Gassman, R. M.; Langs, D. A.; Pangborn, W. A.; Duax, W. L.; Pletnev, V.: Gramicidin D Conformation, Dynamics and Membrane Ion Transport, 129

Camarero, J. A. See Ayers, B., 343
Castiglione Morelli, M. A. See Adinolfi, S., 153
Chen, Y. See Kido, H., 79
Chmielewski, J. See Yao, S., 370
Chung, N. N. See Schiller, P. W., 411
Cotton, G. J. See Ayers, B., 343

Dawson, P. E. See Beligere, G. S., 363
De Simone, G. See Lombardi, A., 19
Dooley, C. T.
—; Houghten, R. A.: New Opioid Peptides, Peptidomimetics, and Heterocyclic Compounds from Combinatorial Libraries, 379
Duax, W. L. See Burkhart, B. M., 129
Dunn, B. M.
—; Pennington, M. W.; Frase, D. C.; Nash, K.: Comparison of Inhibitor Binding to Feline and Human Immunodeficiency Virus Proteases: Structure-Based Drug Design and the Resistance Problem, 69

Evans, Jr., T. C.
—; Xu, M.-Q.: Intein-Mediated Protein Ligation: Harnessing Nature's Escape Artists, 333

Fauszt, I. See Bajusz, S., 109
Frase, D. C. See Dunn, B. M., 69
Fraternali, F. See Adinolfi, S., 153
Fujiwara, Y. See Kiso, Y., 59

Galdiero, S. See Lombardi, A., 19
Gassman, R. M. See Burkhart, B. M., 129
Gatos, D. See Barlos, K., 266
Gioria, S. See Mutter, M., 121
Glockshuber, R. See Liu, A., 145

Harzer, U. See Bechinger, B., 174
Helmle, M. See Bechinger, B., 174
Hijikata-Okunomiya, A. See Okada, Y., 41
Hilgenfeld, R. See Berchtold, H., 165
Holford, M. See Ayers, B., 343
Hornemann, S. See Liu, A., 145

Houghten, R. A. See Dooley, C. T., 379
Hruby, V. J.
—; Agnes, R. S.: Conformation–Activity Relationships of Opioid Peptides with Selective Activities at Opioid Receptors, 391
Huber, C. P. See Matsumoto, K., 99

Imamura, Y. See Kido, H., 79
Ishida, T. See Matsumoto, K., 99

Juhász, A. See Bajusz, S., 109

Keller, M. See Mutter, M., 121
Kido, H.
—; Beppu, Y.; Imamura, Y.; Chen, Y.; Murakami, M.; Oba, K.; Towatari, T.: The Human Mucus Protease Inhibitor and Its Mutants are Novel Defensive Compounds Against Infection with Influenza A and Sendai Viruses, 79
Kim, D. H.
Design of Protease Inhibitors on the Basis of Substrate Stereospecificity, 3
Kimura, T. See Kiso, Y., 59
Kinder, R. See Bechinger, B., 174
Kiso, Y.
Editorial: Protease Inhibitors, 1
Kiso, Y.
—; Matsumoto, H.; Mizumoto, S.; Kimura, T.; Fujiwara, Y.; Akaji, K.: Small Dipeptide-Based HIV Protease Inhibitors Containing the Hydroxymethylcarbonyl Isostere as an Ideal Transition-State Mimic, 59
Kitamura, K. See Matsumoto, K., 99
Kumagai, I. See Misawa, S., 297

Langs, D. A. See Burkhart, B. M., 129
Law, P. Y.
—; Wong, Y. H.; Loh, H. H.: Mutational Analysis of the Structure and Function of Opioid Receptors, 440
Lemieux, C. See Schiller, P. W., 411
Lew, B. M.
—; Mills, K. V.; Paulus, H.: Characteristics of Protein Splicing in *trans* Mediated by a Semisynthetic Split Intein, 355
Liu, A.
—; Riek, R.; Zahn, R.; Hornemann, S.; Glockshuber, R.; Wüthrich, K.: Peptides and Proteins in Neurodegenerative Disease: Helix Propensity of a Polypeptide Containing Helix 1 of the Mouse Prion Protein Studied by NMR and CD Spectroscopy, 145
Loh, H. H. See Law, P. Y., 440
Lombardi, A.
—; De Simone, G.; Galdiero, S.; Staiano, N.; Nastri, F.; Pavone, V.: From Natural to Synthetic Multisite Thrombin Inhibitors, 19

Maeda, I. See Shimohigashi, Y., 9
Matsumoto, H. See Kiso, Y., 59
Matsumoto, K.
—; Mizoue, K.; Kitamura, K.; Tse, W.-C.; Huber, C. P.; Ishida, T.: Structural Basis of Inhibition of Cysteine Proteases by E-64 and Its Derivatives, 99
Miao, Z. See Tam, J. P., 311
Mierke, D.
NMR Analysis of Peptide Structure and Bioactivity (Editorial to Volume 51, Issue 3, 1999), 173
Mierke, D. F. See Pellegrini, M., 208
Mills, K. V. See Lew, B. M., 355
Misawa, S.
—; Kumagai, I.: Refolding of Therapeutic Proteins Produced in *Escherichia coli* as Inclusion Bodies, 297
Mizoue, K. See Matsumoto, K., 99
Mizumoto, S. See Kiso, Y., 59
Moore, J. M.
NMR Techniques for Characterization of Ligand Binding: Utility for Lead Generation and Optimization in Drug Discovery, 221
Mosberg, H. I.
Complementarity of δ Opioid Ligand Pharmacophore and Receptor Models, 426
Muir, T. W. See Ayers, B., 343
Murakami, M. See Kido, H., 79
Musco, G. See Adinolfi, S., 153
Mutter, M.
—; Wöhr, T.; Gioria, S.; Keller, M.: Pseudo-Prolines: Induction of *Cis/Trans*-Conformational Interconversion by Decreased Transition State Barriers, 121

Nash, K. See Dunn, B. M., 69
Nastri, F. See Lombardi, A., 19
Németh, K. See Bajusz, S., 109
Nguyen, T. M.-D. See Schiller, P. W., 411
Nose, T. See Shimohigashi, Y., 9

Oba, K. See Kido, H., 79
Okada, Y.
—; Tsuda, Y.; Tada, M.; Wanaka, K.; Hijikata-Okunomiya, A.; Okamoto, U.; Okamoto, S.: Development of Plasma Kallikrein Selective Inhibitors, 41
Okamoto, S. See Okada, Y., 41
Okamoto, U. See Okada, Y., 41

Pangborn, W. A. See Burkhart, B. M., 129
Pastore, A. See Adinolfi, S., 153
Patthy, M. See Bajusz, S., 109
Paulus, H. See Lew, B. M., 355
Pavone, V. See Lombardi, A., 19
Pellegrini, M.
—; Mierke, D. F.: Structural Characterization of Peptide Hormone/Receptor Interactions by NMR Spectroscopy, 208

Pennington, M. W. See Dunn, B. M., 69
Pletnev, V. See Burkhart, B. M., 129

Riek, R. See Liu, A., 145

Sakakibara, S.
Chemical Synthesis of Proteins in Solution, 279
Editorial: Chemical Synthesis of Proteins (Volume 51, Issue 4, 1999), 245
Schiller, P. W.
Editorial: Peptide and Peptidomimetic Ligands of Opioid Receptors, 377
—; Weltrowska, G.; Berezowska, I.; Nguyen, T. M.-D.; Wilkes, B. C.; Lemieux, C.; Chung, N. N.: The TIPP Opioid Peptide Family: Development of δ Antagonists, δ Agonists, and Mixed μ Agonist/δ Antagonists, 411
Schinzel, S. See Bechinger, B., 174
Schirmeister T.
Inhibition of Cysteine Proteases by Peptides Containing Aziridine-2,3-Dicarboxylic Acid Building Blocks*, 87
Shimohigashi, Y.
—; Nose, T.; Yamauchi, Y.; Maeda, I.: Design of Serine Protease Inhibitors with Conformation Restricted by Amino Acid Side-Chain–Side-Chain CH/π Interaction, 9
Staiano, N. See Lombardi, A., 19
Strohbach, J. W. See Thaisrivongs, S., 51

Tada, M. See Okada, Y., 41
Tam, J. P.
Editorial: Ligation and Splicing of Peptides and Proteins (Volume 51, Issue 5), 309
Tam, J. P.
—; Yu, Q.; Miao, Z.: Orthogonal Ligation Strategies for Peptide and Protein, 311
Thaisrivongs, S.
—; Strohbach, J. W.: Structure-Based Discovery of Tipranavir Disodium (PNU-140690E): A Potent, Orally Bioavailable, Nonpeptidic HIV Protease Inhibitor, 51
Towatari, T. See Kido, H., 79
Tse, W.-C. See Matsumoto, K., 99
Tsuda, Y. See Okada, Y., 41

Vogt, T. C. B. See Bechinger, B., 174

Wanaka, K. See Okada, Y., 41
Weltrowska, G. See Schiller, P. W., 411
Wilkes, B. C. See Schiller, P. W., 411
Wöhr, T. See Mutter, M., 121
Wong, Y. H. See Law, P. Y., 440
Wüthrich, K. See Liu, A., 145

Xu, M.-Q. See Evans, Jr., T. C., 333

Yamauchi, Y. See Shimohigashi, Y., 9
Yao, S.
—; Chmielewski, J.: A pH-Tunable Peptide Ligase, 370
Yu, Q. See Tam, J. P., 311

Zahn, R. See Liu, A., 145

Peptide Science

Subject Index to Volume 51

$[14–38]_{Abu}$, 191
Acetalins, 379
Actinidin, 99
Active site binding, 69
AIDS, 51
Allosteric transformation, 165
α-Chymotrypsin, 3
α-Hydroxymethyl-fluorenyl-2-succinamic acid resin, 279
Amino acids, 266
Amyloid peptide, 174
Angiogenin, 279
Anti-HIV drug, 59
Anti-influenza virus, 79
Antithrombotics, 19
Aspartyl protease, 51
Aziridine-2,3-dicarboxylic acid, 87

Binding mode, 99
Bioactive conformation, 426
Bovine pancreatic trypsin inhibitor, 191
Bradykinin, 208
Building blocks, 87

Caspases, 109
Catalytic efficiency, 370
Cathepsin B, 99
Cathepsin K, 99
Cathepsin L, 99
Cecropins, 174
Chemical ligation, 370
Chimera studies, 440
CH/π interaction, 9
Chymotrypsin, 9
Circular, 333
Cis/trans isomerization, 121
Clara cells, 79
Cleavage, 333
Cloning, 440
Coiled coil, 370
Combinatorial libraries, 379
Conformation-activity relationships, 391
Conformational isomers, 129
Conformational restriction, 9
Conformational restriction of opioid peptides, 391
Conformationally restricted peptides, 426
Connolly surface, 69
Convergent peptide synthesis (CPS), 266
Cyclophilin A, 121
Cysteine proteases, 87, 109

Degradation of proteins, 87
δ Opioid agonists, 391
DNA binding, 363
Drug design, 69, 221
Drug discovery, 51

E-64, 99
E-64 derivative, 99
Enzyme inhibitor, 9, 69
Expressed protein ligation, 343

9-Fluorenylmethyloxycarbonyl/*t*butyloxycarbonyl-based protecting scheme, 266
Fragile X, 153
Free N-terminal (NT)-amines, 311

Glycosylated polypeptide, 247
G-protein coupled receptors, 208, 426
Gramicidin D, 129
Green fluorescent protein, 279

Helix propensity of a prion protein fragment, 145
High affinity binding, 440
High-level expression, 297
Hirunorms, 19
HIV, 51, 174
HIV protease analogue, 59
HIV protease inhibitor, 59
HOE 901, 165
Human mucus protease inhibitor, 79
Hydrophobic core residues, 191
Hydrophobic mismatch, 174

Inclusion body, 297
Infection, 79
Influenza, 174
Influenza A, 79
Inhibition, 87
Inhibitor design, 3
Inhibitors, 109
Inhibitory conformation, 9
Inhibitory mechanism, 99
Insulin, 165
Intein, 333
Interleukin-1β converting enzyme, 109
Ion coordination, 129
Isotope editing, 221

Kaffiralin, 379
κ Opioid agonists, 391
KNI compound, 59

LAH_4, 174
Library, 221
Ligand binding, 221
Ligand–receptor interactions, 426
Ligation, 355

Macroscopic complexes, 174
Magainins, 174
Magic angle spinning, 174
Maximum protection strategy, 279
Membrane channels, 174
Membrane ion transport, 129
Midkine, 279
Mixtures, 379
Model systems, 174
Modular proteins, 153
Molecular recognition, 426
μ Opioid antagonists, 391
Multisite directed thrombin-inhibitors, 19
Mutational analysis, 440

Native chemical ligation, 363
Natural thrombin inhibitors, 19
New affinity gel, 41
New solvent systems, 279
nmr, 191, 221
NMR spectroscopy, 129
NMR structure determination, 145
Nonpeptidic interaction, 440
N-(*trans*-4-aminomethylcyclohexanecarbonyl)-phenylalanine-4-carboxymethylanilide (Tra-Phe-APAA), 41

Opioid ligands, 379
Opioid peptides, 391, 426
Opioid peptidomimetics, 391
Opioid receptors, 440
Orthogonal amide ligating strategy, 311

Papain, 3, 99
Parathyroid hormone, 208
Peptide conformation, 129
Peptide hormones, 208
Peptide ligase, 370
Peptide mimetics, 311
Peptide structure, 174, 208
Peptide synthesis, 363
Peptide thioester, 247
Peptidic ligand interaction, 440
peptidyl β-homo-aspartals, 109
Phenacyl ester, 279
Phenol, 165
Phospholipid membranes, 174
Phosphorylated polypeptide, 247
PKSI-Toyopearl, 41
Plasma kallikrein selective inhibitors, 41
Pleiotrophin, 279
PNU-140690E, 51
Polymer, 333
Polypeptide antibiotics, 174
Polypeptide synthesis, 247
Polypeptides in neurodegenerative disease, 145
Polyproline helices I and II, 121
Pro-rich peptides, 121
Protease, 79
Protease inhibitors, 51
Protein ensembles, 191
Protein ligation, 333
Protein semisynthesis, 343
Protein splicing, 355
Protein synthesis, 363
Protein-only hypothesis, 145
Proteins, 311
Protraction of activity, 165
Pseudo-prolines, 121
Purification, 333

R_6 insulin, 165
Receptor activation, 440
Receptor domains, 440
Recombinant protein, 297
Refolding, 297
Renaturation, 297
Retroviral protease, 69
Review, 333
RNA-binding, 153

Screening, 221
Selective labeling, 191
Selectivity, 440
Semisynthetic split intein, 355
Sendai viruses, 79
SHAPES, 221
Signal sequences, 174
Small-sized dipeptide inhibitor, 59
Solid-state nmr spectroscopy, 174
Solution synthesis, 279
Splicing, 333
Stereochemical approach, 3
Substrate stereospecificity, 3
Substrate transition state analogue, 59

Therapeutic protein, 297
Thioester, 333
Thioester method, 247
Tipranavir disodium, 51
Trans, 355
Transferred NOE, 221
Transmissible spongiform encephalopathies, 145
Trinucleotide expansion, 153
Tryptase Clara, 79

Unfolded and partially folded proteins, 191

Viral channel protein, 174

X-ray crystal structures, 19
X-ray crystallography, 69, 129

Zinc finger, 363